What is claimed is:

1. A media-gateway controller comprising:

a storage unit, which stores a codec conversion table indicating a relationship between a first codec and a second codec in conversion from the first codec to the second codec;

a receiver, which receives first call setting data including codec data of a caller from the caller and receives first call response data including codec data of a callee from the callee as a response to second call setting data having been transmitted to the callee;

a data transformer, which searches the codec conversion table for a first codec using the caller's codec data as an index, adds a second codec corresponding to the searched first codec to the first call setting data to generate the second call setting data, searches the codec conversion table for a second codec using the callee's codec data as an index, and replaces the callee's codec data included in the first call response data with a first codec corresponding to the searched second codec to generate a second call response data; and

a transmitter, which transmits the second call setting data to the callee and transmits the second call response data to the caller.

2. The media-gateway controller of claim 1, wherein the codec conversion table comprises a field indicating a preference defined based on communication quality and data processing speed of each codec,

when two or more second codecs are added to the first call setting data, the data transformer sorts the second codecs according to the preference, and

when the callee's codec data included in the first call response data is replaced with two or more first codecs, the data transformer sorts the first codecs according to the preference.

3. The media-gateway controller of claim 1, wherein the callee's codec data included in the first call response data is sorted according to a sequence of the caller's codec data.

4. The media-gateway controller of claim 1, wherein when the caller's codec data included in the first call setting data comprises all of first and second

codecs included in the codec conversion table, the data transformer does not transform the first call setting data and generates the second call setting data which is the same as the first call setting data.

5. The media-gateway controller of claim 1, wherein when at least one codec included in the callee's codec data in the first call response data is the same as a codec included in the caller's codec data in the first call setting data, the data transformer does not transform the first call response data and generates the second call response data which is the same as the first call response data.

6. A method of call set-up processing, comprising:

(a) receiving first call setting data including a caller's codec data from the caller;

(b) searching a codec conversion table, which indicates a relationship between a first codec and a second codec in conversion from the first codec to the second codec, for a first codec using the caller's codec data as an index and generating second call setting data by adding a second codec corresponding to the searched first codec to the first call setting data;

(c) transmitting the second call setting data to a callee;

(d) receiving first call response data including callee's codec data as a response to the second call setting data;

(e) searching the codec conversion table for a second codec using the callee's codec data as an index and generating second call response data by replacing the callee's codec data of the first call response data with a first codec corresponding to the searched second codec; and

(f) transmitting the second response data to the caller.

7. The method of claim 6, wherein the codec conversion table comprises a field indicating a preference defined based on communication quality and data processing speed of each codec,

step (b) comprises sorting a plurality of second codecs corresponding to the searched first codec according to the preference and adding the sorted second codecs to the first call setting data, and

step (e) comprises sorting a plurality of first codecs corresponding to the searched second codec according to the preference and replacing the callee's codec data of the first call response data with the sorted first codecs.

8. The method of claim 6, wherein the callee's codec data of the first call response data is sorted according to a sequence of codec data of the first call setting data.

9. The method of claim 6, wherein step (b) comprises generating the second call setting data which is the same as the first call setting data without transforming the first call setting data when the caller's codec data included in the first call setting data comprises all of first and second codecs included in the codec conversion table.

10. The method of claim 6, wherein step (e) comprises generating the second call response data which is the same as the first call response data without transforming the first call response data when at least one codec included in the callee's codec data in the first call response data is the same as a codec included in the caller's codec data in the first call setting data.

11. A computer readable recording medium having recorded thereon a program for performing in a computer a method of call set-up processing, the method comprising:

receiving first call setting data including a caller's codec data from the caller;

searching a codec conversion table, which indicates a relationship between a first codec and a second codec in conversion from the first codec to the second codec, for a first codec using the caller's codec data as an index and generating second call setting data by adding a second codec corresponding to the searched first codec to the first call setting data;

transmitting the second call setting data to a callee;

receiving first call response data including callee's codec data as a response to the second call setting data;

searching the codec conversion table for a second codec using the callee's codec data as an index and generating second call response data by replacing the

callee's codec data of the first call response data with a first codec corresponding to the searched second codec; and

transmitting the second response data to the caller.